

World first auto cattle muster

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An Australian technology company is close to commercialising the world's first fully automated system for mustering and managing cattle in the rangelands.

Alice Springs-based Precision Pastoral Pty Ltd has developed the Remote Livestock Management System (RLMS), which can save [cattle producers](#) around \$68 a head in annual cattle operational costs and help them ensure their businesses have a strong economic future

The [Australian Government](#) has announced it will provide a \$350,000 grant to help Precision Pastoral to develop, demonstrate and take its automated management system to the Australian and world markets.

"We're talking about a technology with potential to revolutionise the way livestock are managed across the world's arid and semi-arid [rangelands](#)," says Mark Ashley, acting managing director of Ninti One Pty Ltd.

"It introduces to graziers and pastoralists the same sort of precision available to dairy and beef farmers on much smaller properties – enabling them to muster, weigh, monitor, draft and hold pastoral cattle for market over large distances," he adds.

"It saves time, money, labour and capital by using smart remote technology. It can potentially transform the economics and sustainability of extensive grazing in the Australian rangelands – but also in places like the [grasslands](#) of Asia, the Americas and Africa.

The RLMS is a sophisticated combination of hardware and software that uses telemetry to identify weigh and draft individual animals when they come in for a drink of water, explains Tim Driver, the CEO of Precision Pastoral Pty Ltd who are manufacturing the Remote Livestock Management System.

"Cattle are trained to present themselves to the RLMS for recording, then return themselves to the paddock – unless they are ready for market, in which case a drafting gate sends them to a holding paddock to await collection by the stock transporter," Tim says.

"It uses a [solar power](#) to run radio-frequency identification (RFID) readers, which recognise the unique electronic tag in each animal's ear when it passes a gate. The animal is then automatically weighed and drafted. The whole process is overseen by sophisticated software that has been trialled in real-life conditions on Australian cattle stations over the past three years.

"This enables producers to monitor individual cattle whenever they drink

and carry out a range of management actions such as mustering, drafting, monitoring calving rates and fertility, controlling access to feed supplements, and tracking animal growth rates to determine optimum sale times."

The current prototype RLMS is undergoing field trials and research projects with producers throughout remote Australia. Even in the harsh conditions, the system has achieved a 92% up-time and a 99% drafting accuracy. In weight tracking tests, it recorded cattle weights with 97% accuracy - arguably better humans can achieve.

"No other product on the market comes close to providing this level of integration and data analysis," Mr Driver says.

Mr Ashley says that the RLMS does more than help graziers to monitor and muster [cattle](#) 'hands-off' and save money: "Potentially it is part of an even more sophisticated system that helps graziers precisely match grazing pressure to the available pasture, as reported by satellites from space.

"This can help reduce the massive worldwide problem of rangeland degradation by making grazing systems much more sustainable, retaining good cover of native grasses and vegetation – and also locking more carbon.

"The rangelands occupy 40 per cent of the Earth's land surface. They are the largest area of managed land on the planet, but so far humanity has not managed them that well.

"Precision pastoralism will improve the management of both the rangelands and their animals – as well as preserving the pastoral livelihoods of millions of people. This represents a profound contribution by Australian science and technology to a more sustainable

world."

Provided by CRC for Remote Economic Participation

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